

## United States Patent and Trademark Office



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/673,278	09/30/2003	Naoki Nakane	11-189	4730		
23400 7:	590 06/29/2004		EXAM	EXAMINER		
	HARDS, PLC BACON DRIVE		DAVIS, OC	DAVIS, OCTAVIA L		
SUITE 10	BACON DRIVE		ART UNIT	PAPER NUMBER		
RESTON, VA	20190		2855			

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Ø.	
0	

		Application No		Applicant(s)				
*		10/673,278		NAKANE ET AL.				
	Office Action Summary	Examiner		Art Unit				
		Octavia Davis		2855				
Period fo	The MAILING DATE of this communic or Reply	eation appears on the cove	er sheet with the co	rrespondence addres	s			
THE - Exte after - If the - If NC - Failt Any	ORTENED STATUTORY PERIOD FOMALING DATE OF THIS COMMUNIC nsions of time may be available under the provisions of SIX (6) MONTHS from the mailing date of this commuse period for reply specified above is less than thirty (30) period for reply is specified above, the maximum stature to reply within the set or extended period for reply were ply received by the Office later than three months afted patent term adjustment. See 37 CFR 1.704(b).	CATION.  f 37 CFR 1.136(a). In no event, how nication.  days, a reply within the statutory mutory period will apply and will expire ill, by statute, cause the application	vever, may a reply be timel inimum of thirty (30) days v a SIX (6) MONTHS from th to become ABANDONED	ly filed will be considered timely. e mailing date of this commun (35 U.S.C. § 133).	nication.			
Status								
1)	Responsive to communication(s) filed	lon .			i			
2a)□		o) $\boxtimes$ This action is non-fine	nal.					
3)	Since this application is in condition for	or allowance except for fo	ormal matters, pros	ecution as to the me	rits is			
	closed in accordance with the practic	e under <i>Ex parte</i> Q <i>uayle</i> ,	1935 C.D. 11, 453	3 O.G. 213.				
Disposit	ion of Claims							
4)⊠	Claim(s) 1-4 is/are pending in the app	olication.						
	4a) Of the above claim(s) is/are	e withdrawn from conside	ration.					
5)□	Claim(s) is/are allowed.							
6)⊠	Claim(s) <u>1-4</u> is/are rejected.							
7)	Claim(s) is/are objected to.							
8)□	Claim(s) are subject to restrict	ion and/or election requir	ement.					
Applicat	ion Papers							
9)[	The specification is objected to by the	Examiner.						
10)[	10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.							
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).							
11)	The oath or declaration is objected to	by the Examiner. Note th	e attached Office A	Action or form PTO-1	52.			
-	under 35 U.S.C. § 119							
a)	Acknowledgment is made of a claim for All b) Some * c) None of:  1. Certified copies of the priority of None of:  2. Certified copies of the priority of None of:  3. Copies of the certified copies of the priority of Copies of the certified copies of Application from the Internation of See the attached detailed Office action	locuments have been rec locuments have been rec f the priority documents h al Bureau (PCT Rule 17.	eived. eived in Applicatio nave been received 2(a)).	n No I in this National Stag	je			
					·			
Attachmer	··	_	_					
	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PT		Interview Summary (F Paper No(s)/Mail Date					
3) 🔯 Infor	ce of Draftsperson's Patent Drawing Review (P1 mation Disclosure Statement(s) (PTO-1449 or F er No(s)/Mail Date <u>9/30/03</u> .	PTO/SB/08) 5) 5 6) 5	Notice of Informal Pa	tent Application (PTO-152	)			

Application/Control Number: 10/673,278

Art Unit: 2855

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Laidlaw et al.

Regarding claim 1, Laidlaw et al disclose a torque sensing device comprising a first shaft 14 and a second shaft 16 connected coaxially, a torsion bar 18 converting a torque applied between said first shaft and said second shaft into a torsion displacement, a multi-polar magnet 20 fixed to said first shaft, magnetic yokes 21 fixed to said second shaft and disposed in a magnetic field 70 generated by said multi-polar magnet (See Col. 3, lines 4 – 33), collecting rings 50, 52 disposed along an outer surface of said one set of magnetic yokes and opposed to each other via an air gap 46 in an axial direction (See Col. 4, lines 3 – 7), and a magnetic sensor 48 for detecting the density of magnetic flux generated in said air gap (See Col. 3, lines 64 – 66), wherein a pair of flux brushes 42, 4 can include a bottom arcuate surface 54 that is adapted to magnetically engage the arcuate outer surface 56 of the flux rings (See Col. 4, lines 12 – 18).

Regarding claim 2, said magnetic shield 56 has side portions covering side surfaces of said flux collecting rings (See Fig. 8).

Regarding claim 3, the magnetic shield is integrated with the collective rings (See Fig. 8).

Application/Control Number: 10/673,278

Art Unit: 2855

Regarding claim 4, the magnetic shield directly covers the outer cylindrical surface of the

flux collecting rings (See Fig. 8).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

LeMarquand et al (5,705,756) teach a differential torque measuring device.

Uryu et al (6,729,433) teach an automotive electrically powered steering device.

Satoh et al (5,641,916) teach a torque sensor fit for use in vehicular power steering systems.

Nagao et al (6,026,925) teach an improved electrically driven power assisting device.

Any inquiry concerning this communication should be directed to examiner Octavia Davis at 4.

telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays

(9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for

the organization where this application where this application or proceeding is assigned is (703)

872 - 9306.

OD/2855

6/21/04

SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2800

Page 3